Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-20. (Canceled)

21. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures each of which executes ~~a~~ successive communication processes, including a plurality of operational modes, said image data transferred between said memory means and said facsimile controller,

switching means for switching between a plurality of operational modes responsive to said object program in accordance with a predetermined unit of the control procedures, and

control means for executing the control procedure corresponding to the operational mode just switched.

22. (Currently Amended) A facsimile apparatus of claim 21, wherein said memory means has a plurality of areas for storing data from said facsimile controller, said plurality of ~~are as~~ areas corresponding to a respective plurality of modes, and when said switching means switches to one of said plurality of modes, said control means writes the data corresponding to a further one of said plurality of modes into a different area of said memory means from the area which stores the data corresponding to a previous mode.

23. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures, said image data transferred between said memory means and said facsimile controller,

switching means for switching between a plurality of operational modes responsive to said object program, and

control means for executing a respective one of said plurality of control procedures corresponding to a current one of said plurality of operational modes,

wherein said memory means has a first area for storing a command from said facsimile controller and a second area for storing data from the facsimile controller in pairs, each of said pairs corresponding to a respective one of said modes, said control means is further for transmitting the data stored in said second area of said memory means to said signal line while inputting a command for storing from the facsimile controller to the first area corresponding to said second area, and when completing the transmitting of the data stored in said second area, said control means determines whether the transmission of the data from said second area is completed based on the command stored in said first area.

24. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures, said image data transferred between said memory means and said facsimile controller,

switching means for switching between a plurality of operational modes responsive to said object program, and

control means for executing a respective one of said plurality of control procedures corresponding to a current one of said plurality of operational modes,

wherein said memory means has a plurality of banks, and also has a respective plurality of data storage areas for each mode, said plurality of data storage areas store the data from said facsimile controller in a frame unit into said plurality of banks.

25. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures, said image data transferred between said memory means and said facsimile controller,

switching means for switching between a plurality of operational modes responsive to said object program, and

control means for executing a respective one of said plurality of control procedures corresponding to a current one of said plurality of operational modes,

wherein said memory means has a plurality of banks, a respective plurality of status areas, wherein said plurality of command areas store information about a respective plurality of operation instructions, and said plurality of status areas store information showing a respective plurality of buffer status.

26. (Previously Presented) A facsimile apparatus of claim 25, wherein the control means provides an error check of received data from the signal line, and when an error is detected in the received data, a data-error bit is written into one of said plurality of status areas, and the received data is deleted from the respective data storage area.

27. (Previously Presented) A facsimile apparatus of claim 25, wherein the buffer status includes one of a Data Full/Empty condition, abort condition and error condition.

28. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a control process, said image data transferred between said memory means and said facsimile controller,

timer means for monitoring a transition time between a completed control process and a further control process,

means for selecting a control process to be executed in the further control process during the transition time, and

control means for executing the selected control process when the timer means times out.

29. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a control procedures, said image data transferred between said memory means and said facsimile controller,

analysis means for analyzing a received signal,

switching means for switching between a control-channel-mode and main-channel-mode when said analysis means detects a specified signal, and

control means for executing the control procedure corresponding to the operational mode just switched.

30. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures, said image data transferred between said memory means and said facsimile controller,

analysis means for deframing a received data-frame and analyzing the deframed data-frame,

switching means for switching an operational mode from a main-channel-mode to a control-channel-mode when said analysis means indicates that the received data-frame is an RCP (return to control for partial page) frame, and

control means for executing a procedure corresponding to the mode just switched.

31. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures, said image data transferred between said memory means and said facsimile controller,

analysis means for analyzing the received signal,

switching means for switching an operational mode from a control-channel-mode to a main-channel-mode when said analysis means detects a control-channel-ending-signal comprising a special pattern never occurred during data transmitting, and

control means for executing a procedure corresponding to the mode just switched.

32. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures, said image data transferred between said memory means and said facsimile controller,

switching means for switching between a plurality of operational modes responsive to said object program,

control means for executing a respective one of said plurality of control procedures corresponding to a current one of said plurality of operational modes,

modulating means for outputting a modulated signal to the signal line,

demodulating means for outputting a demodulated signal from a received signal fed from the signal line,

error counting means for counting errors of said demodulated signal,

specifying means for specifying an acceptable maximum error volume, and

further control means for controlling said modulating means to transmit a retraining signal to the signal line when an error volume counted by said error counting means exceeds said acceptable maximum error volume.

33. (Previously Presented) A facsimile apparatus of claim 32, wherein said acceptable maximum error volume is specified by the facsimile controller.

34. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures, said image data transferred between said memory means and said facsimile controller,

switching means for switching between a plurality of operational modes responsive to said object program,

control means for executing a procedure corresponding to the mode just switched,

transmitting means for transmitting a specified signal to the signal line,

timer means for counting a specified time when said transmitting means has started to transmit the specified signal,

reset means for resetting said timer means when a response signal to said specified signal is detected from the signal line during the specified time, and

notifying means for notifying the data terminal equipment of an abnormality when the specified time expires before said response signal is detected from said signal line.

35. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

an interface for sending said image data to and receiving said image data from the facsimile controller,

an encoder for transducing transmitted data into a first signal,

a modulator for providing a modulation to the first signal,

a hybrid circuit connected to the signal line for separating transmitted signals and received signals,

a demodulator providing a demodulation to convert one of said received signals into a second signal,

a judging part for converting said second signal into a third signal,

a decoder for transuding the third signal from said judging part into a further received data,

an error counter which generates an error-signal by using said second signal and said third signal,

a calculator for calculating a power of said error-signal, and outputting a quality signal of the received data, and

a controller for inputting the following three signals:

1. the quality signal of the received data from said calculator,

2. a reference signal for determining a retraining control, said reference signal selected by the facsimile controller,

3. an identifying signal from said demodulator for identifying said one of said received signals,

said controller generating a control signal for controlling said modulator.

36. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising: said modem comprising:

memory means for storing an object program containing a plurality of control procedures, said image data transferred between said memory means and said facsimile controller,

analysis means for deframing a received data-frame and analyzing the deframed data-frame,

switching means for switching an operational mode from a main-channel-mode to a control-channel-mode when said analysis means indicates that the received data-frame is an RCP (return to control for partial page) frame, and

control means for executing a respective one of said plurality of control procedures corresponding to a current one of a plurality of operational modes.

37. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures, said image data transferred between said memory means and said facsimile controller,

analysis means for analyzing a received signal,

switching means for switching an operational mode from a control-channel-mode to a main-channel-mode when said analysis means detects a control-channel-ending signal comprising a special pattern never occurred during data transmitting, and

control means for executing a respective one of said plurality of control procedures corresponding to a current one of a plurality of operational modes.

38. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller, ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures, said image data transferred between said memory means and said facsimile controller,

switching means for switching between a plurality of operational modes responsive to said object program,

control means for executing a respective one of said plurality of control procedures corresponding to a current one of a plurality of operational modes,

transmitting means for transmitting a specified signal to a signal line,

timer means for counting a specified time when said transmitting means has started to transmit a specified signal,

reset means for resetting said timer means when a response signal to said specified signal is detected from the signal line during the specified time, and

notifying means for notifying a data terminal equipment of an abnormality when the specified time expires before said response signal is detected from said signal line.

39. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller; ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures each of which executes a successive communication processes including a plurality of operational modes, said image data transferred between said memory means and said facsimile controller,

switching means for switching between a plurality of operational modes responsive to said object program in accordance with a predetermined unit of the control procedures, and

control means for executing a respective one of said plurality of control procedures corresponding to a current one of the plurality of operational modes.

40. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller, ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures each of which executes successive communication processes including a plurality of operational modes, said image data transferred between said memory means and said facsimile controller,

analysis means for analyzing a received signal,

switching means for switching between a control-channel-mode and main-channel-mode when said analysis means detects a specified signal, and

control means for executing the control procedure corresponding to the operational mode just switched.

41. (Currently Amended) A facsimile apparatus comprising:

a facsimile controller~~, and a modulator and demodulator for modulating an image data read by said image reader/recorder and for demodulating a modulated image data received from a signal line; wherein said facsimile controller comprising:~~ including

an image reader/recorder for reading/recording an image,

an image data compressor/expander for compressing/expanding ~~an~~ image data obtained from said image,

a console including a control panel for instructing operation of said facsimile controller,

a central processing unit for controlling operation of the facsimile controller, ~~and said modulator and demodulator comprising:~~

a modem for transmitting and receiving said image data in modulated form, said modem comprising:

memory means for storing an object program containing a plurality of control procedures each of which executes successive communication processes including a plurality of operational modes, said image data transferred between said memory means and said facsimile controller,

analysis means for analyzing a received signal,

switching means for switching between a control-channel-mode and main-channel-mode when said analysis means detects a specified signal, and

control means for executing a respective one of said plurality of control procedures corresponding to a current one of the plurality of operational modes.

42. (Previously Presented) A facsimile apparatus according to claim 21, wherein said switching means is independent from said facsimile controller.

43. (Previously Presented) A method for controlling facsimile communication including a modulator and demodulator for use with a data terminal equipment and a signal line comprising the steps of:

deframing a received data-frame from the signal line,

analyzing the deframed data-frame,

switching an operational mode from a main-channel-mode to a control-channel-mode when said analyzing step detects that the received data-frame is an RCP (return to control for partial page) frame, and

executing the control procedure corresponding to the operation mode just switched.

44. (Previously Presented) A method for controlling facsimile communication including a modulator and demodulator for use with a data terminal equipment and a signal line comprising the steps of:

analyzing the received signal from the signal line,

switching an operational mode from control-channel-mode to a main-channel-mode when said analyzing step detects a control-channel-ending-signal comprising a special pattern never occurred during data transmitting, and

executing the control procedure corresponding to the operation mode just switched.

45. (Previously Presented) A method for controlling facsimile communication including a modulator and demodulator for use with a data terminal equipment and a signal line comprising the steps of:

switching between a plurality of operational modes responsive to an object program,

executing one of said plurality of control procedures corresponding to one of said plurality of operational modes switched to,

transmitting a specified signal to the signal line,

counting a specified time with a timer means,

resetting said timer means when a response signal to said specified signals is detected from the signal line during the specified time, and

notifying the data terminal equipment of an abnormality when the specified time expires before said response signal is detected from said signal line.

46. (Previously Presented) A method for controlling facsimile communication including a modulator and demodulator for use with a data terminal equipment and a signal line and storing an object program containing a plurality of control procedures each of which executes successive communication processes including a plurality of operational modes comprising the steps of:

switching between a plurality of operational modes responsive to said object program in accordance with a predetermined unit of the control procedures, and

executing the control procedure corresponding to the operational mode just switched.

47. (Previously Presented) A method for controlling facsimile communication including a modulator and demodulator for use with a data terminal equipment and a signal line and storing an object program containing a plurality of control procedures each of which executes successive communication processes including a plurality of operational modes comprising the steps of:

switching between a plurality of operational modes responsive to said object program in accordance with a predetermined unit of the control procedures, and

executing a respective one of said plurality of control procedures corresponding to a current one of the plurality of operational modes.

48. (Previously Presented) A method for controlling facsimile communication including a modulator and demodulator for use with a data terminal equipment and a signal line and storing an object program containing a plurality of control procedures each of which executes successive communication processes including a plurality of operational modes comprising the steps of:

monitoring a transition time between a completed control process and a further control process with a timer means,

selecting a control process to be executed in the further control process during the transition time, and

executing the selected control process when the timer means times out.

49. (Previously Presented) A method for controlling facsimile communication including a modulator and demodulator for use with a data terminal equipment and a signal line and storing an object program containing a plurality of control procedures each of which executes successive communication processes including a plurality of operational modes comprising the steps of:

analyzing a received signal from the signal line,

switching between a control-channel-mode and main-channel-mode when said analyzing step detects a specified signal, and

executing the control process corresponding to the operational mode just switched.

50. (Previously Presented) A method for controlling facsimile communication including a modulator and demodulator for use with a data terminal equipment and a signal line and storing an object program containing a plurality of control procedures each of which executes successive communication processes including a plurality of operational modes comprising the steps of:

analyzing a received signal from a signal line,

switching between a control-channel-mode and main-channel-mode when said analyzing step detects a specified signal, and

executing a respective one of said plurality of control procedures corresponding to a current one of the plurality of operational modes.